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Description of DE8709503U

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< Desc/Clsms PAGE NUMBER 1>

### EMI1.1

Golfball with gulf plays arises again and again the problem that balls during < RTI ID=0.0> Spielvorganges< /RTI> are lost and in the bushes or in the grass are no longer discoverable. Therefore considerations were already employed, those < RTI ID=0.0> Golfbälle< /RTI> to equip with a small electronic transmitter, in order to be able to then determine with the usual navigation methods their respective situation.

On the one hand such an equipment is < RTI ID=0.0> Golfbälle< /RTI> much too expensively, on the other hand one this idea fails because of the area and weight, particularly since a small transmitter needs also a current supply. One must assume both diameters and the weight of a Golfballes are specified by international gulf federations. According to at present valid rules the weight may not amount to any more than about 45 g; the diameter is with approximately 42 mm.

For the internal structure of a Golfballes there are different possibilities. Like that are balls on the market, which consist completely of a flexible plastic mass.

Most balls point however one from several ski CH

< Desc/Clsms PAGE NUMBER 2>

ten existing core up, which is surrounded by a hard about 2 mm strong flexible bowl. The core can consist then for example of a flexible plastic mass or however of a rubber core, around which a coil from rubber bands is brought; finally there is still one < RTI ID=0.0> Ausführungsform< /RTI> a Golfballes, with which the core < as; RTI ID=0.0> Gummiball< /RTI> trained < RTI ID=0.0> iat, < /RTI> with one < RTI ID=0.0> liquid < /RTI> keit or a soft mass is filled. On this core then a coil from rubber bands is applied and finally likewise surrounds this entire core a hard flexible bowl.

From this representation it results that for the installation of sätzlicher parts only < into the Golfball; RTI ID=0.0> verhältnismässig< /RTI> little area is available. This area < RTI ID=0.0> dürfte< /RTI> however, around the well-known radar principle for detection these are sufficient

### EMI2.1

< RTI ID=0.0> Golfbälle< /RTI> to use. The innovation exists < RTI ID=0.0> demgemäss< /RTI> in the fact that with such Golfball within the flexible bowl one or more reflectors for radar waves are accommodated in mega+ or the Giga heart range. These reflectors to finding the Golfballes of one ansich admitted radar device illuminated, whereby the reflected signal < in; RTI ID=0.0> Radargerät< /RTI> one marks and one uses the detection of the ball.

▲ top In accordance with an execution form of the innovation these reflectors can be ausgebildeet as foil antennas, which are the outermost layer of the core applied, preferably glued on. These foil antennas are protected then by the outside flexible bowl of the Golfballes.

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It is advisable further to use as detection system the well-known frequency doubling principle whereby the signal of the ball reflectors with double frequency, sent by the radar device, < RTI ID=0.0> zurückkehrt.< /RTI> For this purpose the reflectors consist second leagues in each case in the Golfball of a foil antenna, hiss their internal ends a diode are switched on. This diode causes then the frequency en lamination, which differentiates the signal reflected by the ball with respect to the radar device from other possibly illuminated reflectors. As diode a Varaktor diode (also ?step and Recovery diode?) is preferably used.

It is < in this connection on; RTI ID=0.0> admitted " Recco < /RTI> < RTI ID=0.0> System " referred to, < /RTI> which is used with considerable success already in the avalanche emergency service. The Suchge < RTI ID=0.0>? RK of this Systems< /RTI> that consists in the frequency range of 915 MHz works and one the appropriate reflected signals taking up receiver of a 5-Watt-Sender. Over a hand antenna an arranged signal is sent by the transmitter of this equipment, which is reflected by the reflectors for example attached in the ski boots. Since this Recco-reflector contains an antenna provided with a diode, on this reflector one < RTI ID=0.0> auftretende< /RTI> Signal in its frequency doubles and then to the receiver of the radar device reflected.

The range of this equipment in air is indicated as approximately 60 m.

Such a radar device can thus in the same way for the location of < RTI ID=0.0> Golfbällen< /RTI> are used, if these Golfbälle in accordance with the innovation with an appropriate reflect to foil are equipped.

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Since such Golfball must be balanced in every detail, it is necessary that the reflectors and the diodes are distributed evenly and symmetrisch on the range of the core of the Golfballes if necessary. It will result anyway as appropriate to equip such Golfball with several reflecting antennas and appropriate diodes in order to receive a reflected signal in each situation of the Golfballes.

EMI4.1

< RTI ID=0.0> Ausführungstbeispiele< /RTI> for the execution of such a gulf of ball are represented in the design.

Show: Fig. 1 the cross section of a Golfballes of an execution form, Fig. 2 the cross section of a Golfballes of another out guidance form.

In accordance with the execution form after Fig. 1 consists the Golfball of one < RTI ID=0.0> Gumntikern 1, < /RTI> by a coil the 2 from rubber bands is surrounded. This total core is then surrounded by a hard bowl 3, which exhibits also an elasticity. In Fig. 1 represented cross section picture are two

EMI4.2

6 and/or. 9 switched on. These foils rest upon the internal core of the Golfballes, are appropriately glued on. Since it concerns with the core as well as the hard bowl of the Golfballes insulants, the reflectors consisting of metal can simply without additional isolation presented

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become.

In accordance with the execution form after Fig. the Golfball consists 2 of an internal rubber ball 10, which is filled with liquid or a soft mass. This internal core of a coil from rubber bands 11 is surrounded, on which then again the hard bowl 12 is applied. In the < RTI ID=0.0> ser< /RTI> < RTI ID=0.0> Ausführungsform< /RTI> in accordance with Fig. 2 only the foil antenna 13 and 14 is intended, whereby the two ends of this antenna are attached to a diode 15. Via appropriate mounting of a further antenna in one in addition senkrechten direction a balancing of the rubber ball can take place.



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- < RTI ID=0.0> Schutzajuspruche< /RTI> : 1. Golfball, consisting of one in or mehrschichti towards, at least partly flexibly trained core and this core a surrounding hard flexible Flat one, by the fact characterized that within ela the stischen bowl (3,12) one or more reflectors (4.5, 7.8, 13.14) for radar waves in mega+ or < RTI ID=0.0> Gic - heart Bereich< /RTI> are accommodated.
2. Golfball according to requirement < RTI ID=0.0> 1, < /RTI> thus characterized that these reflectors (4.5, 7.8, 13, 14) nen as Folienanten are trained, those on the outermost layer of the Core applied, preferably glued on, are.
3. Golfball according to requirement 1 and 2, by it characterized that the reflectors consist in each case of a two-piece Fo lienantenne, between their internal ends a Varaktor Diode (6.9, 15) is switched.
4. Golfball according to requirement 1 to 3, by the fact characterized that the reflectors and the diodes are distributed evenly and symetrisch on the range of the core if necessary.

▲ top